# 6CZ5

## Beam Power Tube

**9-PIN MINIATURE TYPE**

**With Heater Having Controlled Warm-Up Time**

**GENERAL DATA**

**Electrical:** ←

| | | |
|---|---|---|
| Heater, for Unipotential Cathode: | | |
| Voltage (AC or DC) | 6.3 | volts |
| Current | 0.45 ± 6% | amp |
| Warm-up time (Average) | 11 | sec |
| Direct Interelectrode Capacitances:▲ | | |
| Grid No.1 to plate | 0.4 max. | μμf |
| Grid No.1 to cathode & grid No.3, grid No.2, and heater | 9 | μμf |
| Plate to cathode & grid No.3, grid No.2, and heater | 6 | μμf |

**Characteristics, Class $A_1$ Amplifier:**

| | | | |
|---|---|---|---|
| Plate Voltage | 75 | 250 | volts |
| Grid-No.2 Voltage | 250 | 250 | volts |
| Grid-No.1 Voltage | 0 | −15 | volts ← |
| Plate Resistance (Approx.) | – | 73000 | ohms |
| Transconductance | – | 4800 | μmhos |
| Plate Current | 130● | 46 | ma |
| Grid-No.2 Current | 16● | 4.6 | ma |
| Grid-No.1 Voltage (Approx.) for plate μa = 100 | – | −40 | volts ← |

**Mechanical:** ←

| | |
|---|---|
| Operating Position | Any |
| Maximum Overall Length | 3-1/16" |
| Maximum Seated Length | 2-13/16" |
| Length, Base Seat to Bulb Top (Excluding tip) | 2-7/16" ± 3/32" |
| Maximum Diameter | 0.750" to 0.875" |
| Dimensional Outline | See *General Section* |
| Bulb | T6-1/2 |
| Base | Small-Button Noval 9-Pin (JEDEC No.E9-1) |
| Basing Designation for BOTTOM VIEW | 9HN |

Pin 1 - Grid No.2
Pin 2 - No Connection
Pin 3 - Grid No.1
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Cathode, Grid No.3
Pin 8 - Internal Connection— Do Not Use
Pin 9 - Plate

← Indicates a change.

## VERTICAL-DEFLECTION AMPLIFIER

→ **Maximum Ratings,** *Design-Maximum Values:*

*For operation in a 525-line, 30-frame system*★

| | | | |
|---|---|---|---|
| DC PLATE VOLTAGE | 350 | max. | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE♦ | 2200 | max. | volts |
| DC GRID-No.2 (SCREEN-GRID) VOLTAGE | 315 | max. | volts |
| PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE | 275 | max. | volts |
| CATHODE CURRENT: | | | |
| Peak | 155 | max. | ma |
| Average | 45 | max. | ma |
| GRID-No.2 INPUT | 2.2 | max. | watts |
| PLATE DISSIPATION | 10 | max. | watts |
| PEAK HEATER-CATHODE VOLTAGE: | | | |
| Heater negative with respect to cathode | 200 | max. | volts |
| Heater positive with respect to cathode | 200● | max. | volts |
| BULB TEMPERATURE (At hottest point on bulb surface) | 250 | max. | °C |

**Maximum Circuit Values:**

| | | | |
|---|---|---|---|
| Grid-No.1-Circuit Resistance: | | | |
| For fixed-bias operation | 0.5 | max. | megohm |
| For cathode-bias operation | 1 | max. | megohm |

▲ Without external shield.

● This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

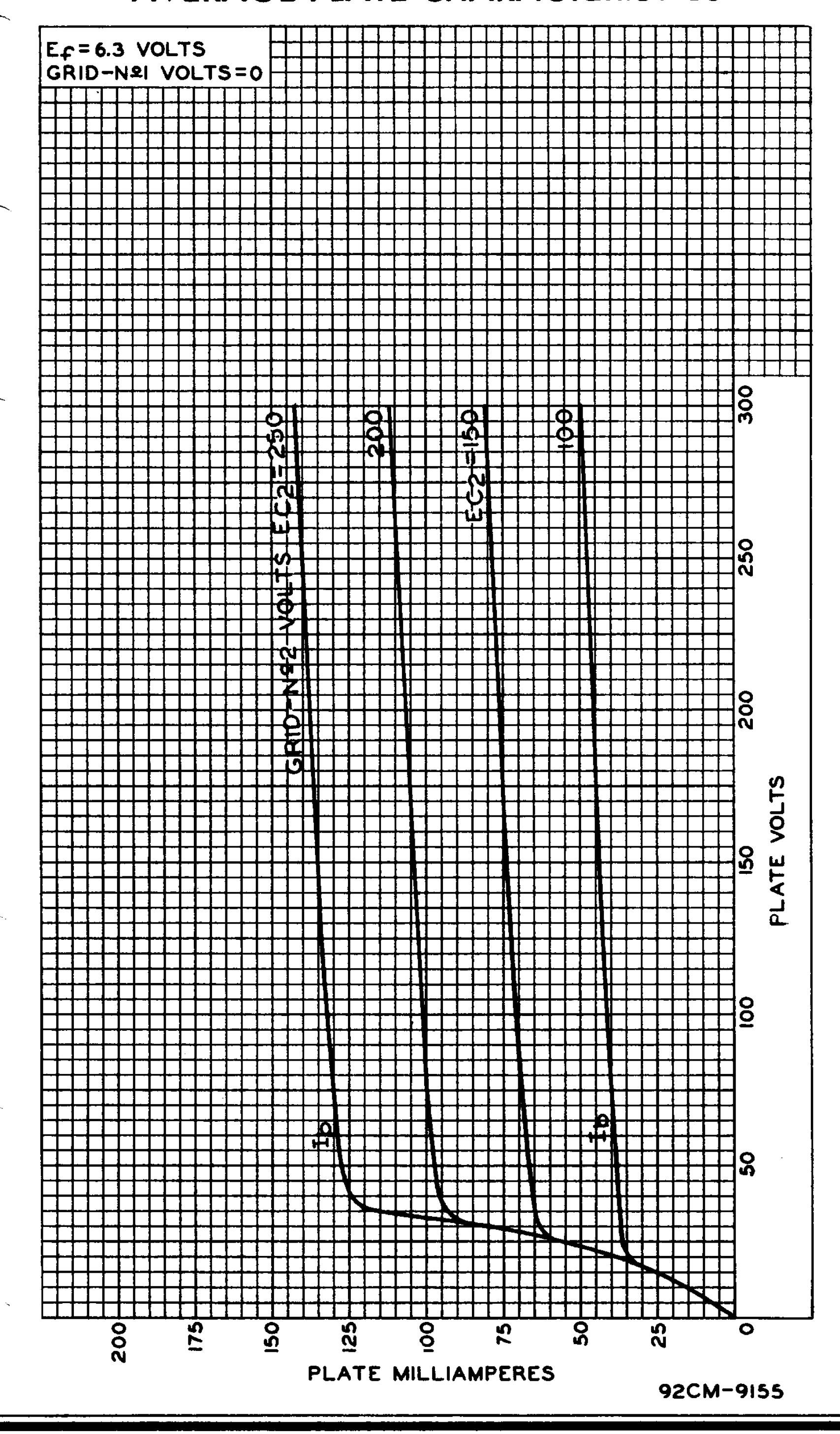
★ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

♦ This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

● The dc component must not exceed 100 volts.

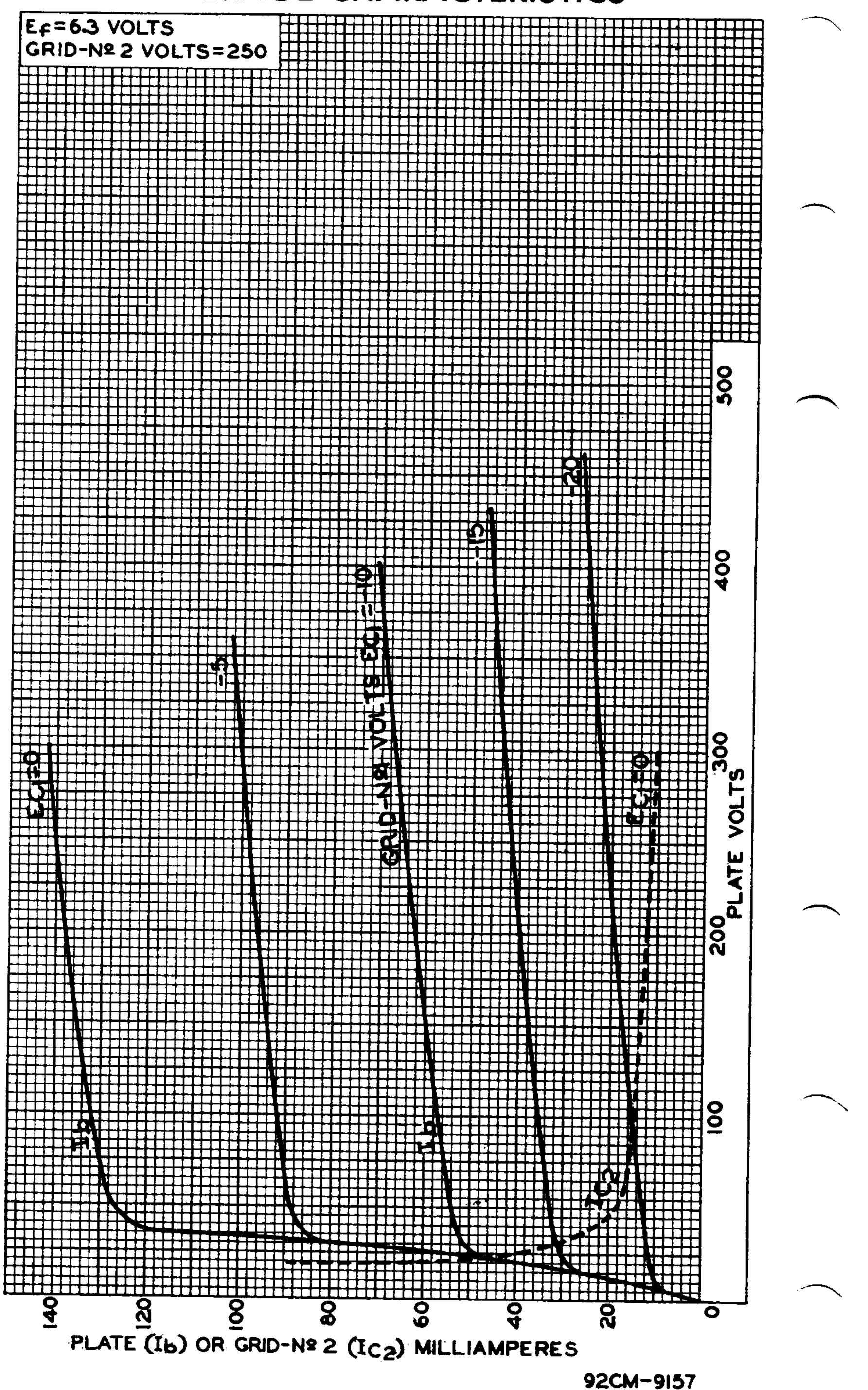
→ Indicates a change.

## AVERAGE PLATE CHARACTERISTICS

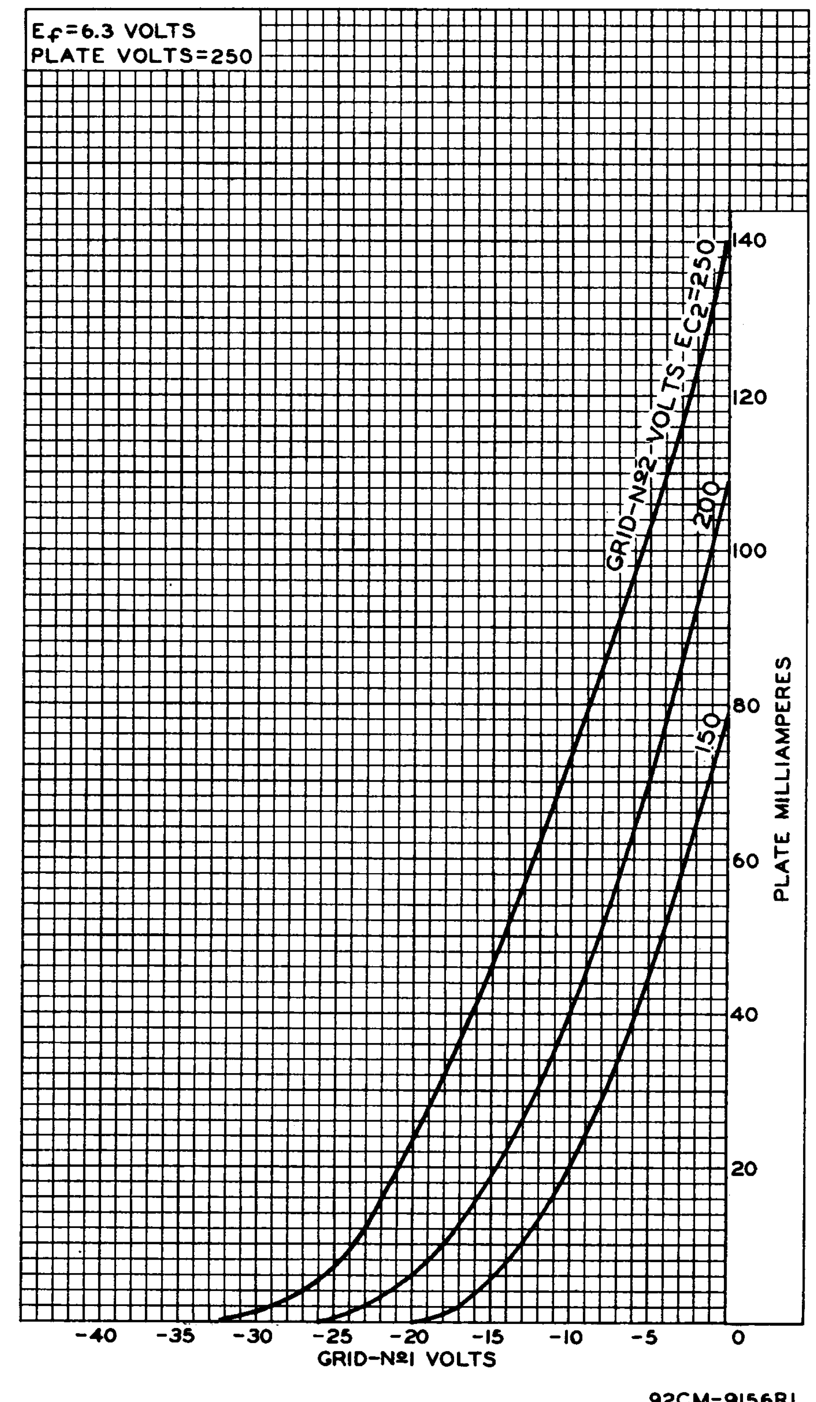



92CM-9155

## AVERAGE CHARACTERISTICS




92CM-9157


AVERAGE CHARACTERISTICS
Ef=6.3 VOLTS
PLATE VOLTS=250
GRID-No2-VOLTS-EC2=250
200
150
140
120
100
80
60
40
20
PLATE MILLIAMPERES
-40 -35 -30 -25 -20 -15 -10 -5 0
GRID-No1 VOLTS

92CM-9156R1